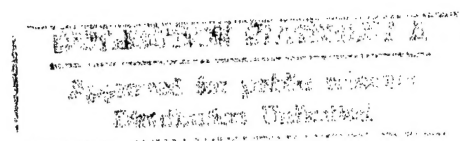


"A Phase I Archaeological Survey of the  
Proposed Kentucky National Guard MATES Facility  
and Adjoining Areas on the Fort Knox Military  
Reservation, Hardin County, Kentucky" by  
Pamela A. Schenian, Fort Knox. June 1995.

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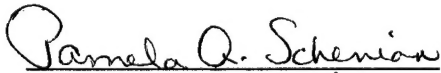
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Project #210136

June 1995

  
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## ABSTRACT

Between November 1993 and May 1995, the Fort Knox contract cultural resource management personnel conducted a Phase I archaeological survey of approximately 126 acres (51 ha) encompassing the proposed Kentucky National Guard MATES facility, secondary access road, and adjoining land on the Fort Knox Military Reservation, Hardin County, Kentucky. The survey resulted in the discovery of no archaeological materials or deposits in the proposed MATES facility or secondary access road tracts, but one site, 15Hd496, approximately 1.2 km north of the proposed MATES facility. Site 15Hd496 is a late nineteenth to early twentieth century historic farmstead with a prehistoric isolate. It is recommended that 15Hd496 is not eligible for the National Register. It is recommended that no additional archaeological work is required in the survey areas described in this report. It is recommended that the MATES facility and secondary access road be constructed as proposed.

## MANAGEMENT SUMMARY

In accordance with Executive Order 11593 and other applicable federal laws and regulations, a Phase I archaeological study was conducted of the proposed Kentucky National Guard MATES facility, on the Fort Knox Military Reservation, Hardin County, Kentucky. Adjoining areas were also surveyed to complete the basic inventory of potential archaeological resources on more acreage of the installation and to facilitate coordination with the State Historic Preservation Office if the MATES facility is expanded in the future. No archaeological materials or deposits were found in the MATES facility project area, but one historic archaeological site with a prehistoric isolate, 15Hd496, was found approximately 1.2 km north of the proposed MATES tract. It is recommended that 15Hd496 is not eligible for the National Register. It is recommended that the MATES facility be constructed as proposed. It is recommended that no further archaeological studies are required for any of the surveyed areas adjoining the proposed MATES facility described in this report.

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## INTRODUCTION

In May 1995, the Fort Knox Contract Staff Archeologist, an employee of J.M. Waller Associates, Burke, Virginia, completed a Phase I archaeological survey of the proposed Kentucky National Guard Mobilization and Training Equipment Site (MATES) facility tract (Project #210136) at Fort Knox, Hardin County, Kentucky (Figure 1). The project area is located in Hunting Area 20 and Training Area 13. The proposed facility will be constructed within a 23 acre (9.3 ha) area comprising a 900 foot by 1100 foot (274 m by 335 m) rectangle located on the west side of Wilson Road, and immediately north of an existing washrack facility. A secondary access road will run from Frazier Road to the MATES facility along the west side of the existing washrack facility.

During 1993, the Fort Knox Contract Staff Archeologist gathered all of the documents necessary to perform Phase I literature searches for the installation (e.g., site forms, reports of previous investigations, historic maps). All documents necessary to perform Phase I literature searches for the installation are present at the Environmental Management Division of the Directorate of Public Works, Fort Knox. No file check was made with the Office of State Archaeology and the Kentucky Heritage Council specifically for this project. A literature search revealed that the project area had not been previously surveyed, therefore, during the present project the entire area was walked, supplemented by shovel probing.

The proposed MATES facility is located in the Plain section of the Pennyryle cultural landscape, on the undulating surface of a karstic plain that is riddled with sinkholes. Elevations in the project area range from 730 to 780 feet. Soils are classified as Crider-Vertrees soil association (U.S.D.A. 1975: General Soil Map). Drainage in the project area is into sinkholes. The headwaters of a tributary of Mill Creek lie 150 m east of the proposed MATES facility, and Mill Creek is located 2.3 km to the east.

The archaeological survey was conducted in preparation for the construction of the MATES facility. The facility will include the following: a 94,000 square foot high-bay vehicle maintenance building; a 14,000 square foot storage, weapons repair, and administrative building; a controlled waste handling facility; a gravel parking area; a diesel fueling facility; a vehicle loading ramp; and wash platforms. The archaeological survey and literature review were required to comply with the National Environmental Protection Act, or NEPA, (Public Law 91-190), the Historic Preservation Act of 1966, as amended (Public Law 89-665), the Archaeological Resources Protection Act of 1979 (Public Law



FIGURE 1. Location of Areas Surveyed.



96-95), Presidential Executive Order 11593, and Army Regulation 420-40.

In November 23, 1993, the contract Staff Archaeologist (Schenian) and Assistant Staff Archaeologist (Stephen T. Mocas) surveyed a proposed landfill expansion project and associated proposed borrow pit, described in Mocas (1993). Because it was a nice day and the crew had no other immediate survey needs or else could not access other project areas, Schenian and Mocas continued surveying the area adjacent to the east and outside the landfill and borrow pit project area. Because a site was found in the area surveyed outside that project area and the landfill report needed to be completed as quickly as possible, it was decided to report on only the investigation of the landfill and borrow areas, and leave the other area unreported until there was more time to get a site number and the surveyed area become an immediate need or else could be tied in with an immediate need area. The results of the area surveyed outside the landfill and borrow project area on November 23, 1993, are included in this report, as is the survey of the area lying between the proposed MATES facility and the November 23 survey area. This connecting area was surveyed on May 30, 1995, by Pamela Schenian. When all surveyed areas are included, the project area described in this report is a maximum of 1700 m long (north-south) by a maximum of 400 m wide (east-west), encompassing approximately 126 acres (51 ha).

The majority of the MATES project area was initially surveyed on June 6, 1994, by Stephen T. Mocas and Michael Siefring, and the survey of the MATES facility and access road was completed by Schenian on May 25 and 30, 1995. A total of 2.75 person hours were spent in the survey of the proposed MATES facility and access road and 9.75 person hours in the survey of all areas described in this report. Artifacts were collected from one site, 15Hd496, in this survey. The artifacts and associated documentation from this project will be curated at the University of Louisville Program of Archaeology, on a "permanent loan" basis, under contract number DABT 23-93-C-0093, for curatorial and technical support (copy of contract on file, Directorate of Public Works [DPW], Fort Knox, Kentucky). Duplicate copies of the documentation will be stored at DPW, U.S. Army Armor Center and Fort Knox, Fort Knox, Kentucky.

#### SETTING AND ENVIRONMENTAL BACKGROUND

The proposed MATES facility, access road, and adjoining areas surveyed are located in the Plain section of the Pennyryle cultural landscape. The project area lies in the Mississippian Plateau physiographic region of Kentucky (McGrain and Currens 1978:35) on the undulating surface of a karstic plain that is riddled with sinkholes and has little

above ground drainage. The headwaters of intermittent tributaries of Mill Creek lie 250 m east of the MATES facility and 400 m east of the north end of the area surveyed, and an intermittent tributary of Tioga Creek begins 600 m north of the area surveyed. Mill Creek, the closest permanent stream, lies 2.3 km to the east. Mill Creek is a tributary of the Salt River, and Tioga Creek is a tributary of the Ohio River.

Elevations in the project area range from 730 to 780 feet. Soils are classified as Crider-Vertrees soil association (U.S.D.A. 1975), with Nicholson silt loam and Vertrees silty clay loam being the predominant soil types (Arms et al. 1979: Map 2). The Crider-Vertrees soil association is characterized as "deep, well-drained soils, formed in residuum from limestone with most areas having a thin loess mantle on undulating to rolling upland plains" (U.S.D.A. 1975). The St. Louis limestone formation underlies the soils in the project area (Kepferle and Sable 1977).

All areas surveyed had been used for tank training until recently. The north third and the west margin of the area surveyed is still in use for tank training. The areas still used for tank training were nearly devoid of vegetation and eroded into subsoil in most areas. The tank trails along the west margin of the project area were deeply rutted and eroded.

The central third of the area surveyed and an approximately 10 m wide strip immediately adjacent to the west side of Wilson Road had been rehabbed in the fall of 1992 or spring of 1993. Aerial photographs taken before the rehab of these areas show numerous deep erosional gullies. Aerial photographs taken shortly after the rehab show that the area had been smoothed by extensive bulldozing and/or disking. Only small islands of trees had been left untouched by the rehab process. The rehabbed areas were planted in native grasses to hold the soil. Ideally, the rehabbed areas were not supposed to be entered into by vehicles for a period of at least two years, but truck ruts through the grass showed that some vehicles had passed through the areas since rehab.

A small wooded area adjoins the existing wash rack at the southwest end of the project area. Most of the trees appeared to be less than 50 years old, and evidence of previous bulldozing and former tank training was present in the woods in the form of bulldozer piles and tire or track ruts.

The MATES facility tract is no longer used for tank training, but had been in the past. It also had been partially borrowed at some point, especially adjacent to Wilson Road.

## PREVIOUS RESEARCH

Approximately 26,420 acres of the Fort Knox installation have been surveyed, primarily in cultural resource management (CRM) studies. Schenian and Mocas (1994) summarize the archaeological studies conducted on or near the installation through August 1994. This section will focus on the previous research conducted within a 2 km radius of the current project area.

No portion of the project area had been previously surveyed, however, a number of areas around it had been. O'Malley et al. (1980) surveyed approximately one-quarter of each of Hunting Areas (HA) 18-20 to the north and northwest of the current project area. O'Malley et al. recorded 15Hd127 and 15Hd133 in HA 18, and no sites in the portions surveyed of HAs 19 and 20. Site 15Hd127 and 15Hd133 are small lithic scatters of indeterminate prehistoric-cultural affiliation. Mocas (1993) described the results of the survey of a proposed landfill and borrow pit tract, in which no archaeological sites were encountered. Mocas (1994a) surveyed a sports complex tract approximately 2 km southeast of the current project area, encountering no sites. Mocas (1994b) surveyed a water tower tract and pipeline along Frazier Road, encountering no sites. Schenian (1995) surveyed a poweline easement proposed for timber harvest along Longstreet Road, encountering no sites.

No archaeological sites listed on or eligible for listing on the National Register of Historic Places are located in or immediately adjacent to the current project area. No building listed on or eligible for the National Register are located in or within the viewshed of the current project area. All buildings within the viewshed of the current project area are less than 45 years old. The south end of the L&N Turnpike segment nominated for the National Register lies approximately 1.5 km north of the project area, at the intersection of Wilson Road and Baker Road.

## SURVEY PREDICTIONS

Based on previous archaeological research in the area, the history of settlement, and the environmental setting of the project area, the following results were expected:

- 1) The proposed MATES facility tract and most of the adjoining area had been used for tank maneuver training. The project area is therefore expected to have some disturbance due to training and erosion.

- 2) The 1919 Camp Knox land acquisition map indicated that the structures on the farmstead of J.J. Welch lay where Bldg. 9384 of the washrack facility now stands, and that the structures on the farmstead of J. Wiggington lay on a small knoll near the northeast corner of the current project area. Additional farmsteads or house sites were historically located in the area to the north of the proposed MATES facility. There is a high probability that artifacts or structural ruins associated with these historic farmsteads will occur in the project area.
- 3) There were no streams within the project area, and the only drainage was into sinkholes. Therefore, there was little expectation that long term prehistoric habitation sites would be found.
- 4) Previous surveys in the project vicinity have yielded a very low site density for this portion of the karst plain. A low site density is expected for the current project area.
- 5) The portions of the project area which had been rehabbed were deeply eroded prior to rehab and were subject to extensive earthmoving during the rehab process. There is very little potential for intact archaeological deposits in the rehabbed portions of the project area.

#### FIELD METHODS

The entire area surveyed is bounded to the north by Baker Road, to the east by Wilson Road, and to the south by Frazier Road (Figure 2). The west margin is marked more or less by an overhead utility line. The northwest corner of the junction of Frazier Road and Wilson Road is already developed as a washrack facility (i.e., the innards of an automatic carwash without a building around them). The majority of this washrack facility was not inspected since the ground surface is covered by concrete or obviously disturbed. Including all areas surveyed, the project area is a maximum of 1700 m long (north-south) by a maximum of 400 m wide (east-west), encompassing approximately 126 acres (51 ha). The corners of the MATES facility tract were marked by stakes with pink flagging tape on them. If the access road had been staked, these stakes were not identified by the Principal Investigator. A sufficiently wide area was walked, however, to guarantee coverage of the access road area.

All portions of the project area were systematically walked in transects spaced approximately 10 m apart, except for the previously rehabbed areas which were walked at 15 m

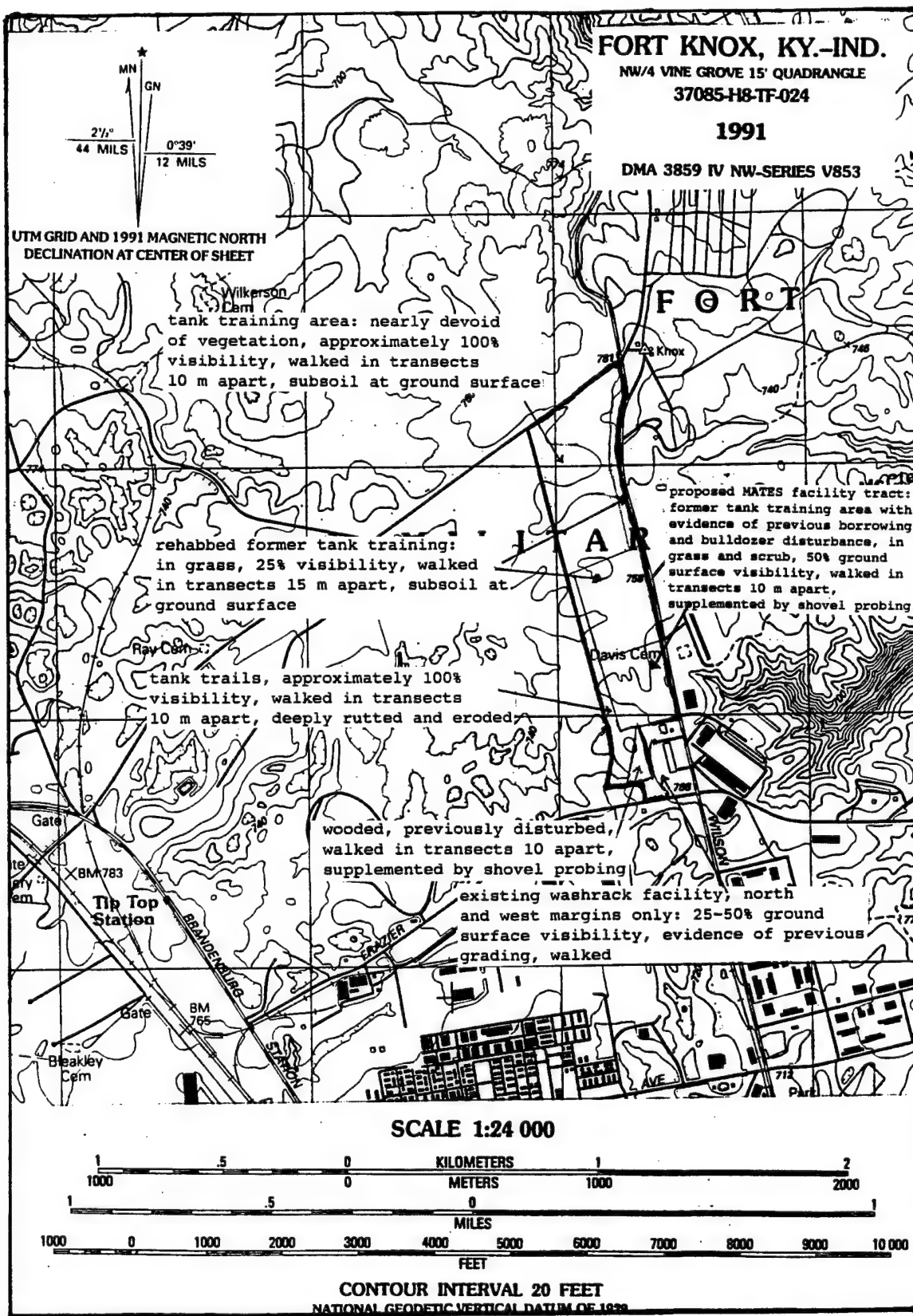


FIGURE 2. Vegetation and Field Methods.

intervals. Ground surface visibility was approximately 100 percent in the north third of the project area and along the west margin of the project area, which are still used for tank training. Ground surface visibility was approximately 50 percent in the small wooded area at the southwest end of the project area. Recent heavy rains had washed away the fallen leaf cover from large areas, and deer paths also afforded an opportunity to observe the ground surface. The MATES facility tract had variable visibility, ranging from 25 to 100 percent, but averaged approximately 50 percent. Portions of the MATES facility were in grass or small shrubs, but densely vegetated areas were limited in extent. The previously rehabbed areas had variable visibility, generally averaging 25 percent, but with 100 percent visibility in tire ruts, new erosional gullies, rodent runs, deer paths, and other bare spots. The islands of trees which had been avoided during the rehabbing process were associated with sinkholes, which were filled with water at the time of survey.

The only areas of the existing washrack facility inspected were the north and west margins of the facility, which adjoin the current project area. These appeared to be less modified than other areas of the wash rack facility, and had some potential to contain remnants of the J.J. Welch farmstead. The areas of the existing washrack facility inspected were in short mowed grass with bare patches in tire ruts. No evidence was found that the J.J. Welch farmstead had translated into an archaeological site.

If the ground surface was obscured by vegetation for greater than 10 m within a transect, then a shovel probe was excavated. Each shovel probe was approximately 30 cm square at ground surface and excavated to a depth of at least 20 cm or until subsoil was encountered. The fill was trowel sorted prior to backfilling of the tests.

The surface inspection and shovel probing resulted in the discovery of several loci of cultural materials. These loci were examined more thoroughly by walkover at 2 to 5 m intervals until no additional cultural materials were noted for a distance of at least 20 m from the last previous find. This thorough examination and the subsequent lab analysis of collected materials determined that only one of the loci was an archaeological site, and the rest were the result of post-Army acquisition garbage and/or construction debris dumping. The post landfill has been located in the northwest corner of the block bounded by Wilson, Frazier, Brandenburg Station, and Baker Roads since the 1940's and vehicles apparently lost part of their loads while cutting through the tank training area on the way to the landfill, or else people chose to dump garbage in and near the sinkholes and in the woods rather than taking the material to the landfill. Construction materials (e.g., concrete blocks) left over from the building of the existing washrack also appear



to have been shoved to the edge of the washrack facility and later moved into the MATES facility tract by tank training activities. Some of the cultural material also appeared to be chunks of old road surface which may have fallen into the project area from Wilson Road as tank training undermined the road bed.

No shovel testing was performed on the one archaeological site (15Hd496) discovered in the area surveyed, because the site area was eroded to subsoil and a portion of the site area had been partially borrowed. There was no surface indication of features or potential features, despite approximately 100 percent ground surface visibility.

In general, the survey of the 126 acre area revealed a high degree of prior disturbance due to tank training, rehab, bulldozing, and borrowing. No archaeological sites were discovered in the proposed MATES facility tract or secondary access road. One archaeological site, 15Hd496, was located at the north end of the area surveyed.

#### ARTIFACT TYPOLOGY AND MATERIALS RECOVERED

A total of nine historic artifacts and one chert flake were recovered from 15Hd496. The historic materials consist of five pieces of bottle glass, one piece of window glass, one ironstone sherd, one stoneware sherd, and one piece of ceramic drain tile. One chert flake was also found as an isolate. The definitions used in sorting these materials are given in the following paragraphs.

#### Prehistoric Artifact Typology

##### Chert Debitage

Chert debitage is a catchall category used to describe the material generally created as a by-product in the manufacture of more formally defined shipped stone tools. Chert debitage may be further divided into the categories of flakes, blocky chert pieces, and chert shatter. It may also be classified by stage of manufacture and by evidence for use as an informal, or expedient, tool. The following criteria have been applied to sort the chert debitage collected in this study:

- 1) Flakes are defined by the presence of a striking platform and bulb of percussion. Concentric rings or ripple marks on the ventral surface, and feather terminations may also be present. Flakes are classified as primary flakes if 90 percent or more of the dorsal surface (the side

opposite the bulb of percussion) is covered by cortex or rind; as secondary flakes if one to 90 percent of the dorsal surface is covered by cortex; and as tertiary flakes if no cortex is present on the dorsal surface.

- 2) A chert piece is classified as shatter if it is a flat, generally small, piece exhibiting some flake-like characteristics, but is insufficiently complete to classify the piece as a primary, secondary, or tertiary flake.
- 3) A blocky chert piece is an angular chert piece lacking flake-like characteristics, and lacking evidence of having served as a core.
- 4) A piece of chert debitage is classified as utilized if at least three contiguous small flakes have been removed from one or more edges by use rather than retouch.
- 5) A piece of chert debitage is classified as unutilized if it exhibits no evidence of the removal of small flakes through use.

### Historic Artifact Typology

Maples (1991) was used to sort the historic artifacts recovered in this project. The following paragraphs summarize the artifact typologies used in the sorting and analysis of the artifacts recovered during this project.

South (1977:95-96) defined a system of artifact classification based on function. Under South's system, for example, ceramics and curved glass are kitchen group artifacts and flat glass and ceramic drain pipes are architectural group artifacts.

### KITCHEN GROUP

#### Ceramics

Historic ceramics are divided into coarse earthenware, stoneware, ironstone, refined earthenware, semi-porcelain, and porcelain. Coarse and refined earthenware have the most porous paste, stoneware and ironstone have less porous paste, and semi-porcelain and porcelain have the least porous paste. Each of these broad categories is further divided into more specific types based on paste texture and color, glaze characteristics, and decoration (Maples 1991).



Ironstone. One white paste ironstone sherd was collected from 15Hd496. Ironstone dates from 1860 to 1920 (Ketchum 1983:201).

Stoneware. One stoneware sherd was collected from 15Hd496. It has gray paste and brown glaze interior and exterior.

### Glass

Glass kitchen artifacts are divided into three main categories. These are bottles, dishware, and canning jar lid liners. No lid liners or dishware were found in this project, but five bottle glass fragments were recovered from 15Hd496. Three are clear, one is aqua, and one is amber. All are unlettered. Amber glass came into common usage after 1860, and clear glass after 1875 (Fike 1987:13). Aqua glass is not a good chronological indicator.

## **ARCHITECTURAL GROUP**

### Flat (window) glass

One piece of green flat glass was recovered from 15Hd496.

### Drain pipe

One piece of a ceramic drain pipe was recovered from 15Hd496. The finding of this drain pipe fragment suggests that the Stovall farm had a cistern.

## **CULTURAL RESOURCE**

### 15Hd496

Site 15Hd496, the J.E. Stovall Site, is located in an upland karst plain, at an elevation of 770 feet, near the boundary with the dissected uplands (Figures B-1 and B-2). Historically, drainage in this area was probably into sinkholes. The site is located in the uplands which form the divide between the Ohio River and Salt River drainage systems. The closest source of water at the time of historic occupation was probably a cistern or well, although no structural evidence was found of one. The site is located on Vertrees silty clay loam, with six to 20 percent slopes. There was only limited patches of sparse grass on the site, but ground surface visibility was nearly 100 percent in all areas of the site.

At the time of Army acquisition, ca. 1919, J.E. Stovall had his farmstead at this site (Figure B-3). Nine structures were located in a generally linear pattern along the former road. These appear to be three large buildings (one house and two barns?) and six smaller outbuildings.

Cultural materials were found over a 100 m (northeast-southwest) by 30 m, or 3000 m<sup>2</sup>, area. The historic materials consisted of five pieces of bottle glass, one piece of window glass, one ironstone sherd, one stoneware sherd, and one piece of ceramic drain tile. One chert flake was also found as an isolate. Most of the historic materials were found concentrated in the former location of the house, with some outliers and the chert flake scattered down the slope to the southwest of the former house site. Some modern refuse was present in this area as well, but was either not collected or was discarded after closer examination in the lab.

Site 15Hd496 is not eligible for the National Register of Historic Places, due to severe erosion, previous disturbance, lack of evidence of intact features or deposits, and a sparse artifact assemblage. The area has been used for tank taining for several decades and the ground surface was eroded to subsoil. The former house site had also been disturbed by borrowing activities. It is recommended that no additional archaeological work be conducted at 15Hd496.

#### CONCLUSIONS AND RECOMMENDATIONS

A Phase I archaeological survey of the proposed Kentucky National Guard MATES facility tract resulted in the discovery of no archaeological materials or deposits in the MATES construction tract or in the proposed secondary access tract. The archaeological survey of the area outside and to the north of the MATES project area resulted in the recording of 15Hd496, approximately 1.2 km north of the proposed MATES construction tract.

Site 15Hd496 is a historic archaeological site on which an isolated chert flake was also found. Site 15Hd496, the J.E. Stovall Site, is not eligible for the National Register due to severe erosion and previous disturbance. No additional archaeological research is recommended for 15Hd496.

It is recommended that the installation be permitted to construct the MATES facility and secondary access road as proposed. It is further recommended that no additional archaeological study be required of the survey areas described in this report in case of the future expansion of the MATES facility or other development of this 126 acre tract.

The survey of the 126 acre (51 ha) tract resulted in the discovery of evidence that only one of the four known former historic farmsteads had translated into an archaeological site. The one site, 15Hd496, had translated only to a limited extent -- a former nine building farmstead complex being represented by a handful of artifacts and no structural remains. This is a much lower percentage than that found in the Schenian and Mocas (1994) survey of 299 acres (121 ha), in which seven of 10 known or probable historic farmstead or house locations were determined to exist as archaeological sites. Both survey areas were used as tank training areas, so the terrain and the proximity to the cantonment area may be bigger factors in the differential preservation than the training activities.

The number of sites recorded in the project area, regardless of age or cultural affiliation, is low in comparison to many other areas of the base. A low site density has been found for other areas surveyed in the karst plain physiographic setting on the installation, however. This low density may be due in part to the probable lack of a reliable source of fresh water in this section of the karst plain. The soil characteristics and erosion patterns of the karst plain may also result in a more rapid degradation of exposed sites in comparison to sites in the non-karst areas of the installation.

In the remote possibility that archaeological materials are discovered during earthmoving activities all activity in the vicinity of the finds must cease and the State Historic Preservation Officer (502-564-7005) and the DPW Environmental Management Division (502-624-6581 or 502-624-3629) should be contacted, so a representative of those agencies may evaluate the materials. Also, if human remains, regardless of age or cultural affiliation, are discovered, all activity in the vicinity of the remains must cease immediately, and the state medical examiner (502-564-4545) and the appropriate local law enforcement agency (Fort Knox Law Enforcement Command, 502-624-6852) must be contacted, as stipulated in KRS 72.020.

## REFERENCES CITED

- Arms, Fred S., Michael J. Mitchell, Frank C. Watts, and  
Byron L. Wilson  
1979 Soil Survey of Hardin and Larue Counties, Kentucky.  
U.S. Department of Agriculture, Washington, D.C.
- Fike, Richard E.  
1987 The Bottle Book. Gibbs M. Smith, Salt Lake City.
- Kepferle, Roy C., and Edward G. Sable  
1977 Geologic Map of the Fort Knox Quadrangle, North-  
Central Kentucky. United States Geological Survey,  
Department of the Interior, Washington, D.C.
- Ketchum, William C.  
1983 Pottery and Porcelain. Alfred A. Knopf, New York.
- Maples, Trina  
1991 Procedures for Cataloguing Historic Materials. 1991  
Update. Program of Archaeology, University of  
Louisville, Louisville.
- McGrain, Preston, and James C. Currens  
1978 Topography of Kentucky. Kentucky Geological Survey  
Series X. Special Publication 25. University of  
Kentucky, Lexington.
- Mocas, Stephen T.  
1993 A Phase I Archeological Survey of a Proposed Con-  
struction/Demolition Debris Landfill and Borrow Pit  
on the Fort Knox Military Reservation, Hardin  
County, Kentucky. Directorate of Public Works, Fort  
Knox.
- 1994a A Phase I Archeological Survey of a Proposed Sports  
Complex Area on the Fort Knox Military Reservation,  
Hardin County, Kentucky. Directorate of Public  
Works, Fort Knox.
- 1994b A Phase I Survey of a Proposed Water Tower and  
Pipeline on the Fort Knox Military Reservation,  
Hardin County, Kentucky. Directorate of Public  
Works, Fort Knox.
- O'Malley, Nancy, Boyce Driskell, Julie Riesenweber, and  
Richard Levy  
1980 Stage I Archaeological Investigations at Fort Knox,  
Kentucky. Archaeological Report No. 16, Department  
of Anthropology, University of Kentucky, Lexington.

Schenian, Pamela A.

- 1995 A Phase I Archaeological Survey of the Proposed Timber Harvest Areas in the Longstreet Range Road Powerline Easement on the Fort Knox Military Reservation, Hardin County, Kentucky. Directorate of Public Works, Fort Knox.

Schenian, Pamela A., and Stephen T. Mocas

- 1994 A Phase I Archaeological Survey of the Fall 1994 Rehab Areas in Training Areas 9 and 10 on the Fort Knox Military Reservation, Meade County, Kentucky. Directorate of Public Works, Fort Knox, Kentucky.

South, Stanley

- 1977 Method and Theory in Historical Archeology. Academic Press, New York.

United States Department of Agriculture

- 1975 General Soil Map, Kentucky. Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C.

United States Geological Survey

- 1991 Fort Knox, Kentucky-Indiana, 7.5 Minute Topographic Quadrangle.

APPENDIX A.  
RESUMES OF KEY PERSONNEL

Pamela A. Schenian  
Staff Archaeologist and Project Principal Investigator

Office Address: Directorate of Public Works  
ATTN: ATZK-DPW (Schenian)  
U.S. Army Armor Center and Fort Knox  
Fort Knox, Kentucky 40121-5000  
Phone: (502) 624-6581

Date and Place of Birth: January 1, 1959; Waukesha, WI.

Present Position: J.M. Waller & Associates/Fort Knox Contract Staff Archeologist

Education:

A.B.D. in Anthropology, Northwestern University, 1984.  
M.A. in Anthropology, Northwestern University, 1982.  
A.B. in Anthropology, Bryn Mawr College, 1980.

Previous Employment:

Senior Staff Archeologist, Archeology Service Center,  
Department of Sociology, Anthropology, and Social Work, Murray State University, Murray, KY, November 1991-June 1993;  
Staff Archeologist, November 1983-November 1991.

Southern Illinois University, Carbondale, IL: Field Technician, November-December 1985, September-October 1984.

Illinois State Museum Society, Springfield, IL: Field Assistant II (Supervisor), summer 1983; Field Technician, summer 1981.

Center for American Archeology, Kampsville, IL: Field Technician, summer 1982.

Department of Anthropology, Northwestern University, Evanston, IL: Teaching Assistant, 1981-82 academic year.

Great Lakes Archeological Research Center, Milwaukee, WI: Field Technician, summer 1979.

Field Research Experience:

Field experience on prehistoric and historic archeological projects in the states of Illinois, Indiana, Kentucky, New Jersey, South Dakota, Tennessee, and Wisconsin, 1979-present.

Professional Publications, Reports, Papers and Manuscripts:  
84 CRM contract reports on projects in Indiana, Kentucky, and Tennessee.

1 Homicide site excavation contract report prepared in lieu of court testimony in Illinois.

7 Papers presented at professional conferences.

5 Publications, 1 in press.

Doctoral candidacy qualifying paper: "A Theory of Individual Style Variation for Archeological Studies".

Manuscript submitted in partial fulfillment of the M.A.

requirements: "Models of Environmental-Cultural Relationships: Testing with Archeological Evidence".

Stephen T. Mocas  
Assistant Staff Archaeologist

Office Address: Directorate of Public Works  
ATTN: ATZK-DPW (Mocas)  
U.S. Army Armor Center and Fort Knox  
Fort Knox, Kentucky 40121-5000  
Phone: (502) 624-6581

Present Position: University of Louisville Program of  
Archaeology/Fort Knox Contract Assistant Staff Archeologist

Education:

Completed one year of doctoral program, Southern Illinois University, Carbondale, Illinois, 1972.

B.A. in Anthropology, University of Louisville, 1971.

Previous Employment:

Indiana University, Bloomington, Indiana: Staff Archaeologist, September 1991-November 1993.

Murray State University, Murray Kentucky: Staff Archaeologist, November 1991-November 1993.

Jefferson Community College, Louisville, Kentucky.  
Anthropology Instructor, August 1981-December 1982.

Louisville School of Art, Louisville, Kentucky: Anthropology Instructor, January-May 1976.

University of Louisville Archaeological Survey, Louisville, Kentucky. Project Director, Field Supervisor, or Research Assistant on various projects, July 1969-January 1977.

State University of New York of Buffalo, Buffalo, New York. Senior Field Worker, June-August 1970.

Field Research Experience:

Field experience, Phase I-III, prehistoric and historic archaeological projects in the states of Illinois, Indiana, Kentucky, New York, and Tennessee, 1969-present.

Research Grants:

Six grants for fieldwork and research.

Professional Publications, Reports, Papers and Manuscripts:

- 3 non-contract site reports on projects
- 15 CRM contract reports on projects
- 5 Chapters in additional site reports.
- 4 Publications, 1 in press.



APPENDIX B.  
LOCATION OF 15Hd496